



U.S. Department  
of Transportation

**Federal Railroad  
Administration**

# Memorandum

Date: June 15, 1998

Reply to Att. of: MP&E 98-21

Subject: Vertical Isolation Pads in 125-Ton Trucks on Articulated Double Stack Cars

From: Edward R. English  
Director, Office of Safety Assurance and Compliance

To: Regional Administrators, Deputy Regional Administrators,  
Motive Power & Equipment Specialists and Inspectors

Roller bearing adapter pads designed with a square surface depression of about 5 inches and about 3/16-inch deep, were at one time common on articulated equipment. They had a high failure rate and an effort was made to replace them and the specially designed adapter.

The pad was designed to fit in the 5 inch square depression of the roller bearing adapter and act as the crown for proper contact with the truck side frame roof. There were at least three pad designs. The two with highest failure rate were made to look like a square plate about d -inch thick, consisting of metal plates and a plastic material which was found to crush and deteriorate. The other pad design was a rounded plate about d -inch thick with squared shoulders for retention in the adapter depression.

Complete failure of the pad will leave a flat surface on the top side of the adapter where the crowned surface should be in contact with the truck side frame roof. Partial failure will tend to concentrate the off-center loading to the part of the pad that has not failed. This creates a potential roller bearing failure.

Defective conditions can be easily detected by close inspection. There should be a void between the adapter and the side frame roof, except where the pad is the buffer between the two. The pad should provide enough thickness in the center to act as the crown of the adapter.

If these pads are found defective they should be reported on the appropriate inspection report using code 215.117(E)(1) "Roller bearing adapter resilient wear plate (vertical isolation pad) defective or not in its designed position".

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